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EFFECTS OF AUDIOVISUAL MATERIALS ON CHANGING THE ATTITUDES OF CULTURALLY DISADVANTAGED YOUTH. FINAL REPORT.

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THIS STUDY INVESTIGATED THE USE OF AUDIOVISUAL STIMULUS MATERIALS TO CREATE POSITIVE CHANGES IN THE SCHOOL-RELATED ATTITUDES OF 128 NEGRO AND 88 NON-NEGRO DISADVANTAGED JUNIOR HIGH SCHOOL BOYS. EACH SUBJECT WAS INDIVIDUALLY SHOWN FOUR EXPERIMENTAL SLIDES WHICH WERE ACCOMPANIED BY INTERVIEWS WITH SIMILARLY DISADVANTAGED NEGRO YOUTHS AND A YOUNG ADULT NEGRO WHO HAD CONSIDERABLY BETTERED HIMSELF THROUGH EDUCATION. TWO SETS OF VARIABLES WERE STUDIED--(1) STUDENTS WERE EITHER FURNISHED OR NOT FURNISHED AN OPPORTUNITY TO CHOOSE WHAT SLIDE TO VIEW NEXT, AND (2) THEY WERE ALLOWED OR NOT ALLOWED TO RESPOND OVERTLY INTO A MICROPHONE. SUBJECTS WERE ADMINISTERED AN ATTITUDE INVENTORY BEFORE AND AFTER EXPOSURE TO THE EXPERIMENTAL TREATMENT. A CONTROL GROUP COMPLETED THE ATTITUDE MEASURES BUT WERE EXPOSED TO NONE OF THE PRESENTATIONS. DATA WERE ANALYZED BY VARIANCE AND T-TEST. ONLY THE METHOD THAT COMBINED A MULTICHOICE FORMAT OF PRESENTATION WITH ACTIVE PARTICIPATION WAS SIGNIFICANTLY EFFECTIVE IN PRODUCING POSITIVE SHIFTS IN ATTITUDE. NEGROES WITH LOWER IQ SHOWED THE GREATEST ATTITUDE CHANGE. (LB)

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U.S. DEPARTMENT OF
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Final Report

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We wish to dedicate this study to the memory of Mrs. Edith M. Wilkins, who died while it was in progress. It was Mrs. Wilkins who set the pattern for the approach that was taken and who patiently obtained the audio interviews that served as the nucleus around which the materials were developed. It would have been a far different study without her devoted help.

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CONTENTS

SUMMARY

This study investigated the problem of changing the attitudes of culturally disadvantaged junior high school boys toward the values of school learning and the importance of staying in school to receive an education. Two sets of variables were studied: modes of organizing the format of audiovisual presentations and modes of eliciting student participation to the presentations.

Objectives

The purpose of the study was to compare the effectiveness of sound slide presentations in order to achieve the following specific objectives:

1. To determine the individual and combined effects of audio-visual materials presented by two organizational formats and two conditions of student participation.

2. To determine such combined effects at five different levels of affect.

Procedure

Four experimental sound slide presentations were produced to combine two modes of organizing the format (furnishing an opportunity to make a choice of what segment to receive next, or the absence of this choice) and two modes of active student participation (furnishing an opportunity to respond overtly into a microphone, or the absence of this opportunity). The stimuli were presented to the 216 culturally disadvantaged junior high school boys (128 Negro; 88 Non-Negro) individually in semi-isolated booths by means of rear visual projection and audio headphones. Responses were made by selecting choices on a response box and by speaking into a microphone. A fifth experimental treatment was given to small groups of subjects by means of front screen projection, loudspeaker, and group discussion. A control group completed the attitude measures but was exposed to none of the presentations. Subjects were administered a 53-item attitude inventory two weeks before exposure to the experimental treatments and immediately after such exposure. Performance on the attitude inventory was obtained for total score and for five different levels of affect. Analysis of the data was by analysis of variance and t-test.

Results and Conclusions

The results and conclusions are summarized below for the major comparisons and for the mental ability characteristics of the learners:

1. Although all experimental groups made positive attitude shifts, only the method that combined a multi-choice format with active participation was significantly greater than the control group.

2. Active participation was most effective in producing positive attitude changes, particularly with the Negro boys.

3. When no opportunity for participation or choice was given, the attitude change was smallest.

4. The patterns of attitude change varied greatly between subjects with higher and lower mental ability, the lower ability Negroes showing the greatest positive attitude change.

5. In summary, the study demonstrated the feasibility of designing audiovisual stimulus materials to bring about changes in attitudes. It showed that such changes would more likely occur when subjects were provided an opportunity to participate actively by responding to the content of the message. It supported the contention that stimulus materials tailored to the characteristics of a particular audience would have a greater chance of changing the attitudes of that group than of a different group. And it indicated that subjects of lower mental ability were more susceptible to such persuasion.

CHAPTER I

INTRODUCTION

This exploratory study was directed toward the problem of discovering how certain attitudes and behaviors of culturally disadvantaged youth could be modified by the use of audiovisual media. The systematic investigation of specific media design factors, particularly as they relate to attitude change, has been largely neglected. There might be reason to believe that the culturally disadvantaged individual--because of his inferior self concept, emotional insecurity, and exposure to an impoverished and authoritarian home environment--would react differentially to instructional stimuli that involved him actively as an individual and that offered him alternate routes through the material as compared with the more expository and conventional types of instructional materials. It was to the investigation of this problem that the study was directed.

The Problem

This study had as its purpose the investigation of the effects of specially designed visual and audio stimuli in changing the attitudes of culturally disadvantaged junior high school boys toward the values of school learning and the importance of an education. The stimulus material was presented in two different organizational formats combined with two different conditions of student participation.

Specifically, four experimental versions of sound slide materials were designed and produced. Two of the versions were prepared in a "single-choice" and two in a "multiple-choice" organizational format. Each of these versions was presented to elicit either "active student participation" or "no active student participation." In combination, the two variables--organizational format and student participation--comprised a 2 x 2 factorial design. These experimental treatments were presented to junior high school boys randomly assigned to the different treatments. Exposure to the stimuli was made to each subject individually in carrels by means of rear projection for the visuals and headphones for the audio narration. An attitude measure was administered to all subjects two weeks prior to exposure to the stimuli and immediately after such exposure. The effects of the four treatments were determined by comparing the before-after measures.

The study had as its objective the determination of the effects of organizational format and student participation upon attitudes toward school learning. The specific objectives studied were:

1. To determine the effects of two conditions of presenting behavioral audiovisual material in different organizational formats upon the attitudes of culturally disadvantaged junior high school boys toward school learning.

2. To determine the comparable effects of two conditions of student participation upon such attitudes.

3. To determine such combined effects at five different affective levels: being aware of the existence of the value, responding to the condition, accepting the value, organizing a value system, and characterizing the value.

Review of Related Research

Despite the fact that the literature pertaining to instructional media contains many studies related to the design of instructional materials--most completely reviewed by Hoban and van Ormer (1950), Lumsdaine (1963), and Lumsdaine and May (1965)--no general pattern of optimal media design has yet emerged. Although Travers (1967), Gagne (1965), Allen (1967), Gropper (1966), Briggs and others (1967), and Smith and others (1967) have made some efforts toward determining appropriate media for the meeting of particular educational objectives, these have largely been concerned with cognitive learning. There has been a dearth of definitive research pertaining to the use of audiovisual media in changing attitudes, particularly as related to the actual physical design of such messages.

The media research specifically relevant to this study is of two kinds: that relating to predispositions of the audience and that relating to activities during exposure to the stimuli.

Predispositions of the Audience

Hoban and van Ormer (1950) concluded, from an analysis of instructional film research to 1950, that the ability of any medium of communication to modify motivations, attitudes and opinions lies not so much in the medium itself, "but in the relationship of content and bias of the medium to (a) the personality structure of the perceiving individuals, and (b) the social environment of the audience." Several studies investigated this question, particularly the effects that audience attitude toward and audience identification with the main character had upon modifying attitudes in the direction advocated by that character. Kishler (1950) found that a film starring a Catholic priest had more effect upon the tolerance attitude of those who originally

held the role of Catholic priest in high regard than those who held it in low regard. Scollon (1956) concluded that when the communicator was a prestige figure and highly related to the audience reference group, the film was more effective in changing attitudes. Kraus (1962) found that attitude change was more likely to result from the viewing of a kinescope where the audience shared certain cultural values and norms with the communicator. Miller and Roberts (1965) concluded that visual stimuli which serve to identify the communicator's race exercise a different impact on audiences of varying personality types. Mertens (1951) studied the effects of mental hygiene films on university women and found that those who had problems similar to the problems discussed in the films seemed to react more strongly and remembered the films longer. There appears to be adequate evidence, therefore, to suggest that a communication designed to conform to the attitude structure and characteristics of the viewer would have some advantage in modifying the viewer's attitudes. This study attempted to utilize this conclusion by preparing visuals that depicted Negro boys in familiar situations and audio that included live recordings of Negro boys and the voice of a Negro narrator.

There was also research evidence that attitude changing communications designed to conform to the viewer's motives were more effective in changing attitudes among those for whom the materials were intended than among individuals in general. Edling (1963) determined such motives by means of attitude inventories of high school students and found that those students whose motives were congruent with films produced to modify attitudes toward post-high school education made a significantly higher attitude change in the target direction than students whose motives were incongruent with the film message. Levonian (1960, 1963) tailored a film to a particular audience on the basis of a factor analysis of responses to an opinion film-questionnaire and found highly significant changes in opinion resulting from exposure to the specially designed film. Stormes (1967) concluded, from an analysis of film experiments in attitude change, that the most generally supportable conclusion was that utility of information seemed to be a reliable motivation for changing attitudes. These studies appear to add further support to the procedure followed in preparing the experimental treatments used in this study.

Audience Activities during Exposure to Stimuli

The efficacy of incorporating opportunities for student participation during exposure to audiovisual stimuli has been widely studied and has been reported in detail by Allen (1957, 1960) and Lumsdaine (1963). The research evidence strongly confirmed the value of such participation in cognitive learning, but there has been no comparable investigation of this variable in affective attitude change. However, Berelson and Steiner (1964) generalized related research on mass communication by stating, "Active participation in the communicating itself--

e.g., passing on the message to someone else, making a speech about it, or simply putting it in one's own words--is more effective for retaining information and for persuading than is passive reception of the communication, especially for people who are low in ability or motivation and for difficult or complex material." The present study attempted to test this conclusion of Berelson and Steiner by incorporating such opportunities participation into two of the experimental treatments.

CHAPTER II

METHOD AND PROCEDURES

Controlled experimentation was used to assess the combined effects of two variables in changing the attitudes of culturally disadvantaged junior high school boys toward the values of school learning and the importance of an education.

Experimental Design and Method

Two sets of independent variables were manipulated in the study: modes of organizing the format of the stimuli and modes of eliciting active student participation. The effects of these variables upon changing the attitudes of the subjects were compared by means of a 2 x 2 factorial pretest-posttest control group research design.

Experimental Variables

Organizational Format. Two different methods of presenting the stimulus material were designed into the four sound slide treatments:

1. Multi-Choice sequence, in which the sound slide presentation was stopped after each of five expository sequences, at which time the subjects were directed by the narrator on the audio track to make a choice as to what one of three segments he wanted to see and hear next. These three choices appeared on the screen as a slide, and the subject punched a button to make his choice. Although the subject thought he was hearing and seeing a different track on the basis of his selection, the same presentation was given regardless of which alternative he chose. This mode was employed in Treatment Nos. 1 and 2.

2. No Choice sequence, in which the sound slide presentation continued through each of the five expository sequences without stopping to permit a choice of the next segment to see and hear. This mode was employed in Treatment Nos. 3 and 4.

Participation Condition. Two different methods of providing the subjects with opportunities to participate actively, by means of overt response during the exposure to the stimulus presentation, were designed into the four sound slide treatments:

1. Active Participation, in which the sound slide presentation was stopped at seven different points and the subjects directed by the narrator on the audio track to speak into the microphone and answer the question or talk about the problem that appeared on the screen as a slide. The subject talked as long as he wished and then pushed the "Advance" button to go on to the next sequence. The intent of this activity was to engage the subject actively in the material being presented in a positive way by making him verbalize opinions advocating school learning. This mode was employed in Treatment Nos. 1 and 3.

2. No Participation, in which the sound slide presentation continued without stopping for student response. This mode was employed in Treatment Nos. 2 and 4.

The combination of these experimental variables resulted in four experimental treatments: Multi-Choice/Participation, Multi-Choice/No Participation, No Choice/Participation, and No Choice/No Participation.

Group Participation. A group of 16 seventh-grade subjects was shown the No Choice/Participation sound slide treatment in several small groups. Instead of responding to the participation questions individually, they engaged in a group discussion of the problem under the direction of one of the experimenters (Caucasian).

Control Group. A control group viewed none of the sound slide treatments, but took the pre- and post-attitude measure only.

Experimental Design

The design of the study called for the development of the four experimental sound slide treatments described above, the administration of these treatments to subjects (individually or in groups) under controlled conditions, the administration of the attitude measure before and after exposure to the stimulus material, and the comparison of the performance data by means of appropriate statistical techniques. The random assignment of the subjects and the employment of a pretest-posttest control group design controlled for all sources of internal invalidity listed by Campbell and Stanley (1963). The experimental stimuli and attitude measure were administered under equal and controlled conditions, and the experimental treatments were identical except for the variables being studied.

Comparisons of the response data were made for the combinations of the two independent variables--Multi-Choice Sequence/Participation, Multi-Choice Sequence/No Participation, No Choice Sequence/Participation, No Choice/No Participation--for the Group Participation group, and for the Control group (which did not view the stimulus treatments, but completed the pre- and post-attitude measure). These comparisons were made for the Total population, for the Negro Only group, and for the Non-Negro group on the total attitude measure and on the five at-

titude subtests (awareness, responding, valuing, organization and characterization). In addition, comparisons were made between the High IQ groups and Low IQ groups for the Total population, for the Negro Only groups, and for the Non-Negro groups.

Experimental Population

The total experimental population consisted of 216 junior high school boys from the Washington Junior High School, located in a culturally disadvantaged area of the Pasadena Unified School District (California). By grade level, 101 (46.8%) were in the seventh-grade and 115 (53.2%) were in the eighth-grade. By race, 128 (59.3%) were Negro, 28 (13%) Caucasian, 13 (67%) Mexican, 37 (17.1%) Oriental, and 10 (4.6%) of other indeterminate ancestry.

The subjects were distributed to the six experimental treatment groups, separately by grade, by using a table of random numbers. An analysis of variance was performed to determine if the distribution of subjects to the six experimental treatments, based on total IQ score, had been random. The mean scores, standard deviations, and homogeneity of the means are presented in Table 1. The F values for the analysis of variance were not significant for either the Negro groups, the Non-Negro groups, or the Total groups, confirming the validity of the randomization procedure and attesting to the comparability (in IQ) of the treatment groups in each of the racial groups.

Development of the Experimental Stimulus Materials

The experimental visual stimulus materials were presented by means of 2" x 2" color transparency slides. The accompanying audio stimulus materials were presented by means of magnetic recording tape. These materials were combined for presentation to each subject individually by means of rear screen projection and audio headphones in a semi-private carrel. The experimental scripts are shown in Appendix A.

The development of the stimulus materials followed an intensive study of the factors considered to be effective in modifying the attitudes of culturally disadvantaged youth. This included interviews with specialists in the education of this group,[1] review of the litera-

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[1]Dr. Newton S. Metfessel, Director of Project Potential and Professor of Education, University of Southern California; Dr. David Martin, Professor of Education, University of Southern California; Dr. William L. Fowler, Head of Culturally Disadvantaged, Los Angeles County; Dr. Marie Fielder, Director of Teacher Training, University of California, Berkeley; Mrs. Marie Avery, Educational Consultant, Pasadena, California.

TABLE 1

MEAN SCORES, STANDARD DEVIATIONS, AND HOMOGENEITY OF MEANS FOR TOTAL IQ SCORES (ANALYSIS OF VARIANCE)

	NEGRO			NON-NEGRO			TOTAL		
	N	$\bar{X}$	σ	N	$\bar{X}$	σ	N	$\bar{X}$	σ
1. Multi-Choice/ Participation	26	93.50	10.06	14	106.14	17.21	40	97.93	14.17
2. Multi-Choice/ No Participation	22	96.86	9.72	17	104.18	20.28	39	100.05	15.45
3. No Choice/ Participation	24	92.04	13.75	15	108.00	15.23	39	98.18	16.18
4. No Choice/ No Participation	22	96.41	17.32	18	94.94	11.51	40	95.75	14.83
5. Group Participation	7	96.57	8.73	9	100.22	14.08	16	98.63	11.82
6. Control Group	23	91.30	13.60	14	107.50	17.93	37	97.43	17.10

	df	ss	Ms	F	Prob.
NEGRO GROUPS					
Between Means	5	618.89	123.78	0.742	--
Within Groups	118	19687.95	166.85		
Total	123	20306.84	290.63		
NON-NEGRO GROUPS					
Between Means	5	2046.05	409.21	1.528	--
Within Groups	81	21692.19	267.81		
Total	86	23738.24	677.02		
TOTAL GROUPS					
Between Means	5	384.88	76.98	0.328	--
Within Groups	205	48054.75	234.41		
Total	210	48439.63	311.39		

ture on the culturally disadvantaged, and talks with culturally disadvantaged children and their teachers. From these investigations, the particular approach to be employed in the attitude-changing stimuli was evolved. The decision was made to present the stimuli through live recorded interviews of Negro boys from the same age, sex, and cultural groups as the subjects in the experiment. In order to obtain spontaneous reactions by the interviewed boys, a number of small cards displaying provocative words and phrases designed to generate interesting trends of thought and conversation in each interviewee were prepared. The cards were on such topics as "friends," "sports," "music," "when I grow up," "me," "what I do best," etc. Each boy chose four of these cards and addressed them in about fifteen minutes of spontaneous monologue. At a later date these interviews were edited to eliminate repetitions or superfluous comments and to conform to the intent of the stimulus material: that of changing the attitudes of the boys toward the values of school learning and the importance of an education. The four boys interviewed were Negro eighth-grade students at the Sycamore Home for Boys in Pasadena, California. In addition, an interview with a young adult Negro (who had been a drop-out, an inmate of a corrective institution, and who had then come back and completed his schooling and now seemed destined to make something worthwhile of his native abilities) was also included.

In order to tie together the various interviews and to direct the attention of the subjects to the response questions in the presentation, a brief transitional narration was prepared and read into the tape by a Negro narrator. The acceptability or credibility of the audio stimuli was enhanced by the narrator through his use of the patois of his listeners.

The illustrative slide material was prepared from original art work depicting Negro boys in situations broadly linked with the content of the interviews. An effort was made to keep these illustrations from becoming so obtrusively specific as to divert the subjects from focussing on the audio part of the stimuli. Because of its emotional impact, therefore, the main burden of the message was carried in the audio track, with the visual slides serving a supportive role. The directions for response and participation were also printed on the slides. The entire sequence of slides is presented in Appendix A as a part of the script.

Each of the four stimulus treatments was presented in the same order: an opening by the young adult Negro, followed in turn by the four Negro boys, and ending with the young adult again. The Multi-Choice/Active Participation version also included the printed slides and narration pertaining to both the response and participation activities at the appropriate places. The Multi-Choice/No Participation version included only the printed slides for the response activities. The No Choice/Active Participation included only the printed slides for the participation activities; and the No Choice/No Participation included none of the printed slides.

Instrumentation

The colored visual slides were packaged in a Kodak Carousel tray, and the audio tapes were packaged in a repetitive loop Cousino Model R-7320 Repeater Tape cartridge. The audio tape was also coded to activate the slide changes and response box.

The subjects sat in partitioned semi-private booths and viewed a rear projection screen on which the colored slides were shown. They wore headphones to receive the audio stimuli. In front of each subject was a microphone and a response box in which three buttons or keys were mounted. These buttons were labelled A, B, C and ADVANCE. A control unit connected the Kodak Carousel Slide Projector, The Cousino Tape unit, and the response box. Upon activation by coding on the tape, appropriate slide changes were made, tape stops effected, and response box buttons illuminated. Upon subsequent action on the buttons of the control box by the subjects, slide changes, tape stops, and button darkening were effectuated.

The microphones for those subjects engaging in the "participation" versions (Treatments 1 and 3) were connected to tape recorders, which were activated when the subject started the program. All comments were recorded, although these responses were not analyzed in this study.

The experiment was conducted in an air-conditioned trailer located on the school grounds.

Measuring Instruments

Attitude Measure

The attitude measure employed in the study was an inventory of items selected from the Inventory of Self Appraisal (ISA), constructed by Newton S. Metfessel (1965) for use in Project Potential, a study of achievers and non-achievers in Los Angeles City Schools. The modified ISA is presented in Appendix B.

The Inventory of Self Appraisal was used in this study to assess the personal dimension of attitude shift. The ISA consisted of 53 items containing statements relative to hypothetical boys, to which the subject was to check whether the boy's opinion, situation, or action was "Like Me" or "Not Like Me." These 53 items were selected from the 150 items contained in the Metfessel Inventory of Self Appraisal and were assigned to the five levels of the affective domain (Krathwohl and others, 1964) with the assistance of Dr. Metfessel. Thus, it was possible to measure the effects of the ISA as a whole or the effects of any of the five subtests. The five levels of affect, to which the 53 items in the ISA were fitted, were as follows:

1. Awareness, described by Krathwohl and others (1964) as being sensitized to the existence of certain phenomena and stimuli and being willing to receive or attend to them. Ten items in the ISA measured this dimension.

2. Responding, described as being concerned with responses which go beyond merely attending to the phenomenon and involving a commitment in a small way to the phenomenon involved. Twelve items in the ISA measured this dimension.

3. Valuing, described as the holding of a belief or attitude that a thing, phenomenon, or behavior has worth. Eighteen items in the ISA measured this dimension.

4. Organization, described as the organization of the values into a system, the determination of relationships among them, and the establishment of the dominant and pervasive ones. Nine items in the ISA measured this dimension.

5. Characterization, described as being the internalization of the values in the individual's value hierarchy so that they control his behavior. Four items in the ISA measured this dimension.

The ISA attitude measure was administered to the subjects in groups about two weeks prior to the administration of the experimental stimuli. The ISA was administered again immediately following the exposure to the experimental stimuli, each individual starting the test as soon as he completed the audiovisual program. This posttest administration was given in one end of the experimental trailer and supervised by a member of the research staff.

Reliability of the ISA measure, as used in the pretest and as determined through use of Kuder-Richardson Formula #20, was .832. The reliability of the same measure when re-administered as a posttest was .852. The distribution of the scores was normal, showing neither skewing or kurtosis.

Mental Ability Test

The California Test of Mental Maturity average test scores (verbal and non-verbal), obtained from the students' permanent records, were used to categorize the subjects into High IQ and Low IQ groups.

Conduct of the Experiment

Two weeks prior to the presentation of the experimental treatments, all subjects completed the first administration of the Inventory of Self Appraisal attitude measure. This administration of the measure was conducted in a classroom of the boys' gymnasium to intact physical education classes.

The presentation of the experimental stimulus treatments was made in a trailer located on the school grounds. The experimental subjects had previously been assigned at random to the experimental treatments and were called out of their classes, three boys at a time, to receive exposure to the stimulus treatment. Each boy was given verbal instructions individually as he sat in the experimental booth and was supervised long enough to ensure that he knew how to operate the response box controls and the microphone. Because of the variable length of the programs and the variations in time taken by individual boys to complete the program, they finished at different times. As each boy completed the treatment exposure, he was taken to the other end of the trailer (screened from the experimental area) and was re-administered the same ISA attitude measure. A new boy then took his place in the experimental booth, and the procedure was repeated.

The conduct of the Group Participation treatment varied from the procedure followed with the other four experimental groups. The subjects met in groups of from four to six boys and saw the visual slide projected on a screen at one end of the trailer and heard the audio through a loudspeaker. At the appropriate response points, the audio tape was stopped, and an experimenter (Caucasian) conducted a short discussion of the participation questions. When the discussion leader felt that sufficient discussion time had elapsed, he showed the next sequence of visual and audio stimuli.

The Control group was brought to the experimental trailer, individually or in small groups, and received the re-administration of the ISA attitude measure without viewing any of the experimental treatments.

Preparation of Data and Statistical Analysis

Responses to ISA items were made directly on the test itself. After scoring, they were transferred to sensescore sheets for mechanical transfer to IBM cards.

All statistical analyses were made on the Honeywell 800 computer, operated by the staff of the Computer Sciences Laboratory, University of Southern California. The computer program used for the analysis was the "Summary Program," furnishing t-test, one-way analysis of variance, and two-way analyses (Computer Sciences Laboratory, 1967).

CHAPTER III

RESULTS

The results of the Inventory of Self Appraisal attitude measure were analyzed for differences between pretest and posttest scores by racial groups in the total experimental population and by the high and low mental ability groups. Separate analyses were made for the total attitude measure and for each of the five subtests in the attitude measure separately.

Analysis of Attitude Change by Racial Group

The mean scores for the total test and five subtests of the Inventory of Self Appraisal (ISA) attitude measure for the Negro subject groups, the Non-Negro groups, and the Total groups (Negro and Non-Negro combined) are presented in Table 2. The scores presented and used in all of the analyses were computed by subtracting the pretest attitude scores from the posttest attitude scores to result in a difference or change in attitude as measured by the ISA. The positive values indicate the difference change in the direction intended by the stimuli--that is, toward a more positive attitude regarding the values of school learning and the importance of staying in school and obtaining an education. The negative values indicate an attitude change in a direction opposite to that intended by the stimuli.

Examination of the Total scores on the ISA measure shows a tendency for the Multi-Choice/Participation and the Group Participation groups to make the largest shifts in the positive direction and the No Choice/No Participation groups to make the smallest shift. Similarly, all of the Participation groups demonstrated larger positive shifts than did the No Participation groups. The Control group positive attitude shift was also relatively high, surpassing that of all the No Participation groups.

The Responding and Valuing subtests most closely paralleled the changes on the Total test. There was less difference of change for the Characterization subtest than for the other four subtests, and the Control group positive change was exceeded only by the Group Participation group among the Non-Negro subjects.

TABLE 2

TOTAL AND SUBTEST SCORES OF DIFFERENCES BETWEEN PRETEST AND POSTTEST MEANS ON ISA FOR NEGRO AND NON-NEGRO GROUPS (N = 216)

	N	Total (53 items) $\bar{X}$	Awareness (10 items) $\bar{X}$	Responding (12 items) $\bar{X}$	Valuing (18 items) $\bar{X}$	Organiz. (9 items) $\bar{X}$	Charac. (4 items) $\bar{X}$
NEGRO GROUPS							
1. Multi-Choice/Participation	26	3.731	.731	.885	1.077	.692	.346
2. Multi-Choice/No Participation	22	.909	.500	-.045	.091	.046	.318
3. No Choice/Participation	25	1.520	.120	1.160	.280	-.120	.080
4. No Choice/No Participation	22	1.045	.318	.727	-.409	.227	.182
5. Group Participation	7	2.429	.571	1.000	1.143	.000	-.286
6. Control	26	1.231	.115	.846	.192	.115	.346
NON-NEGRO GROUPS							
1. Multi-Choice/Participation	14	1.429	.286	.143	.429	.429	.143
2. Multi-Choice/No Participation	18	1.667	.556	.500	.222	.333	.056
3. No Choice/Participation	15	2.333	.733	.667	.267	.133	.533
4. No Choice/No Participation	18	.222	.222	-.333	.278	-.333	.389
5. Group Participation	9	3.444	1.444	.556	.222	.556	.667
6. Control	14	1.857	-.143	.071	1.071	.286	.571
TOTAL GROUPS							
1. Multi-Choice/Participation	40	2.925	.575	.625	.850	.600	.275
2. Multi-Choice/No Participation	40	1.250	.525	.200	.150	.175	.200
3. No Choice/Participation	40	1.825	.350	.975	.275	-.025	.250
4. No Choice/No Participation	40	.675	.275	.250	-.010	-.025	.275
5. Group Participation	16	3.000	1.062	.750	.625	.313	.250
6. Control	40	1.450	.025	.575	.250	.175	.425

Comparison of Major Variables

A two-way analysis was performed between the Organizational Format and the Participation Condition variables for Treatments 1, 2, 3 and 4. Table 3 presents the results of this analysis, with t-values and probabilities of significance derived, for the Total test and subtests for the Negro, Non-Negro, and Total subject groups. All probabilities up to the .10 level are presented because of the exploratory nature of this study and the importance of showing all possible effects of the experimental stimuli. Although those comparisons significant at only the .10 level probably cannot be accepted with confidence, they will serve to show possible directions and trends for later investigation.

On the Format variable (Multi-Choice vs No Choice), although there was a tendency for a positive attitude shift in favor of the Multi-Choice groups, the only statistically significant differences were made on the Organization subtest for the Total groups ($< .05$) and the Characterization subtest for the Non-Negro group ($< .10$). There was a tendency, however, for the Multi-Choice groups to be favored over the No Choice groups.

The Participation variable (Participation vs No Participation) appeared to have a more pervasive effect upon attitude change. For the Negro groups, the Total test and the Responding and Valuing subtests showed a significant ($< .10$) positive attitude change in favor of the Participation modes. This change was not present among the Non-Negro groups, but did hold for the Total groups ($< .05$, $< .05$, and $< .10$).

There was some evidence of interaction between the Format and Participation variables--the Multi-Choice format tending to interact with the Participation condition to result in greater positive attitude change and the No Choice format tending to interact with the No Participation condition to produce the least positive change--but this interaction was statistically significant only with the Negro groups on the Responding subtest ($< .10$).

Comparisons between Treatment Groups

A comparison was made of the shift in attitude scores between all treatments modes for the Negro, Non-Negro, and Total subject groups separately, using t-tests to establish the order of differences between means for each mode.

Negro subjects. The comparisons of treatment modes for the Negro subjects, as presented in Table 4, show the Multi-Choice/Participation group to have made a positive attitude shift on the Total ISA measure significantly greater than all other treatment groups except the Group Participation mode. Similarly, the group showed significant Organization subtest superiority over three of the other treatment

TABLE 3

RESULTS OF TWO-WAY ANALYSIS FOR ISA TOTAL TEST AND SUBTESTS FOR SUBJECT GROUPS

	N	Format		Particip.		Interaction	
		t-value	Prob.	t-value	Prob.	t-value	Prob.
NEGRO GROUPS							
Total Test	95	1.10	--	1.80	< .10	.59	--
Awareness Subtest	95	1.40	--	.10	--	.11	--
Responding Subtest	95	1.40	--	1.80	< .10	1.80	< .10
Valuing Subtest	95	1.40	--	1.80	< .10	.07	--
Organization Subtest	95	1.20	--	.60	--	.25	--
Characterization Subtest	95	1.10	--	.20	--	.03	--
NON-NEGRO GROUPS							
Total Test	65	.30	--	.90	--	.59	--
Awareness Subtest	65	.20	--	.30	--	.20	--
Responding Subtest	65	.40	--	.80	--	.34	--
Valuing Subtest	65	.10	--	.20	--	.05	--
Organization Subtest	65	1.40	--	.80	--	.09	--
Characterization Subtest	65	1.90	< .10	.60	--	.01	--
TOTAL GROUPS							
Total Test	160	1.30	--	2.10	< .05	.13	--
Awareness Subtest	160	1.00	--	.30	--	.01	--
Responding Subtest	160	.70	--	2.10	< .05	.08	--
Valuing Subtest	160	1.20	--	1.60	< .10	.08	--
Organization Subtest	160	2.00	< .05	1.00	--	.11	--
Characterization Subtest	160	.20	--	.20	--	.03	--

TABLE 4

SIGNIFICANCE OF DIFFERENCES BETWEEN PRETEST AND POSTTEST MEANS ON TOTAL AND SUBTEST ISA SCORES FOR NEGRO SUBJECTS (N = 128)

		1	2	3	4	5	6
Multi-Choice/Participation	1		T/.05* R/.10 O/.10	T/.10 O/.05	T/.10 V/.05		T/.10 O/.10
Multi-Choice/No Participation	2			-R/.05		-R/.10 C/.05	-R/.10
No Choice/Participation	3						
No Choice/No Participation	4						
Group Participation	5						-C/.10
Control Group	6						

*First figure presented designates the total test (T) or specific subtest; second figure is level of significance determined by t-test. If sign is positive, the group to the left is superior; if sign is negative the group at the top is superior.

groups and Responding and Valuing subtest superiority over one of the other groups. The Multi-Choice/No Participation group was significantly inferior to three of the other groups on the Responding dimension of the ISA. Other comparisons did not appear to reveal any meaningful pattern.

Apart from the overall superiority of the Multi-Choice/Participation version, the major comparisons of interest were those relating to the Control group. As was noted earlier, the Control group (despite lack of exposure to the experimental stimuli) made sizeable positive attitude shifts, and the Multi-Choice/Participation version was superior to it at only the .10 level on the Total ISA and the Organization subtest. Two of the other groups were inferior to it on two of the subtests.

Non-Negro subjects. The major finding for the Non-Negro subjects was the superiority of the Group Participation mode on selected ISA subtests in four of the comparisons, as shown in Table 5. Three of these instances were on the Awareness subtest over the Multi-Choice/Participation treatment ($< .10$), the No Choice/No Participation treatment ($< .05$), and the Control group ($< .05$).

Total subjects. For the combined racial groups, comprising all the experimental subjects, the Multi-Choice/Participation treatment resulted in the greatest positive attitude change, as shown in Table 6. On the Total ISA measure superiority was shown over the Multi-Choice/No Participation treatment ($< .10$) and over the No Choice/No Participation treatment ($< .05$). On the Responding subtest superiority was shown over the No Choice/Participation treatment ($< .05$), the No Choice/No Participation treatment ($< .05$), and the Control group ($< .10$).

The No Choice/Participation group showed a superiority to both the Multi-Choice/No Participation treatment ($< .05$) and the No Choice/No Participation treatment ($< .10$) on the Responding subtest. On the Awareness subtest, the Group Participation treatment was superior to the Control group at the .02 level.

Summary of Results

All treatment groups made positive attitude shifts toward the values of school learning and the importance of staying in school and obtaining an education. But the differences favoring the experimental groups over the control group were small.

Active participation by the subjects was most effective in producing the positive attitude change, particularly with the Negro subjects. When such participation was combined with the opportunity to select the next presentational segment, the greatest attitude change occurred. On the other hand, when no opportunity for participation or choice was given, the attitude change was the smallest.

TABLE 5

SIGNIFICANCE OF DIFFERENCES BETWEEN PRETEST AND POSTTEST MEANS ON TOTAL AND SUBTEST ISA SCORE FOR NON-NEGRO SUBJECTS (N = 88)

		1	2	3	4	5	6
Multi-Choice/Participation	1					-A/.10*	
Multi-Choice/No Participation	2			-C/.10		-C/.10	
No Choice/Participation	3				-R/.10		
No Choice/No Participation	4					-A/.05	
Group Participation	5						A/.05
Control Group	6						

TABLE 6

SIGNIFICANCE OF DIFFERENCES BETWEEN PRETEST AND POSTTEST MEANS ON TOTAL AND SUBTEST ISA SCORES FOR ALL SUBJECTS (N = 216)

		1	2	3	4	5	6
Multi-Choice/Participation	1		T/.10*	0/.05	T/.05 V/.10 0/.05		0/.10
Multi-Choice/No Participation	2			-R/.05			
No Choice/Participation	3				R/.10	-A/.10	
No Choice/No Participation	4						
Group Participation	5						A/.02
Control Group	6						

*First figure presented designates the total test (T) or specific subtest; second figure is level of significance determined by t-test. If sign is positive, the group to the left is superior; if sign is negative, the group at the top is superior.

With the Negro subjects and with the total population, the Multi-Choice/Participation treatment was the most effective. With the Non-Negro subjects, there was less variability among the groups, but the Group Participation treatment was favored slightly.

Analysis of Attitude Change by Mental Ability Level

The mean scores for the total test of the Inventory of Self Appraisal (ISA) attitude measure were split by mental ability level and racial grouping, and one-way analyses of variance were performed to determine the significance of the differences among the treatment groups for each racial-mental ability grouping. The results of these analyses are presented in Table 7.

Only the Negro Low IQ group (subjects whose IQ's fell below the mean for the total group) showed a significant difference at the .02 level among the treatment groups. The Group Participation and the Multi-Choice/Participation treatments registered the greatest positive attitude changes, and the No Choice/No Participation treatment showed a change in the negative direction. Comparing the scores for the No Choice/No Participation for all three groupings (Negro, Non-Negro and Total) of Low IQ subjects, it will be seen that the attitude change was negative. It may also be seen that the Group Participation treatment mode was the most effective in producing positive attitude change by these low IQ groups.

Comparison between Treatment Groups

A comparison was made of the shift in attitude scores between all treatment modes for the Negro, Non-Negro, and Total subject groups separately when split by High IQ and Low IQ, using t-tests to establish the order of differences between means for each mode.

Negro subjects. The comparisons of treatment modes for the Negro subjects, as presented in Tables 8 and 9, show rather different patterns between the High IQ and Low IQ groups. For the High IQ groups, the Group Participation mode was least effective, particularly on the Organization and Characterization subtests. With the Low IQ Negro groups, however, the Group Participation mode was the most effective, showing superiority to every treatment except the Multi-Choice/Participation mode.

For the Low IQ Negro group, the Multi-Choice/Participation treatment showed highly significant superiority on the Total ISA measure to every treatment group except Group Participation. In addition, it was significantly superior to three of other treatments groups on the Awareness subtest and to one group each on the Organization and Valuing subtests. The comparison of this version with the Control group should be particularly noted; for this is the only comparison in the

TOTAL 7

TOTAL ISA DIFFERENCE SCORES AND RESULTS OF ANALYSIS OF VARIANCE FOR SUBJECT GROUPS AND IQ GROUPS

	Total Score Difference	Analysis of Variance df	F	Prob.
NEGRO GROUPS				
HIGH IQ (above mean)				
1. Multi-Choice/Participation	3.000			
2. Multi-Choice/No Participation	1.154			
3. No Choice/Participation	3.625	5/49	.577	—
4. No Choice/No Participation	3.091			
5. Group Participation	.000			
6. Control	1.889			
LOW IQ (below mean)				
1. Multi-Choice/Participation	4.187			
2. Multi-Choice/No Participation	.556			
3. No Choice/Participation	.529	5/67	3.323	< .02
4. No Choice/No Participation	-1.000			
5. Group Participation	5.667			
6. Control	.882			
NON-NEGRO GROUPS				
HIGH IQ (above mean)				
1. Multi-Choice/Participation	1.667			
2. Multi-Choice/No Participation	2.375			
3. No Choice/Participation	3.667	5/36	.602	—
4. No Choice/No Participation	1.000			
5. Group Participation	1.000			
6. Control	1.778			
LOW IQ (below mean)				
1. Multi-Choice/Participation	1.000			
2. Multi-Choice/No Participation	1.100			
3. No Choice/Participation	.333	5/40	.756	--
4. No Choice/No Participation	-.077			
5. Group Participation	4.143			
6. Control	2.000			
TOTAL GROUPS				
HIGH IQ (above mean)				
1. Multi-Choice/Participation	3.062			
2. Multi-Choice/No Participation	1.850			
3. No Choice/Participation	3.000	5/88	.335	—
4. No Choice/No Participation	1.824			
5. Group Participation	2.444			
6. Control	2.000			
LOW IQ (below mean)				
1. Multi-Choice/Participation	2.833			
2. Multi-Choice/No Participation	.650			
3. No Choice/Participation	.957	5/116	1.552	—
4. No Choice/No Participation	-.174			
5. Group Participation	3.714			
6. Control	1.120			

TABLE 8

SIGNIFICANCE OF DIFFERENCES BETWEEN PRETEST AND POSTTEST MEANS ON TOTAL AND SUBTEST ISA SCORES FOR HIGH IQ NEGRO GROUPS (N = 55)

		1	2	3	4	5	6
Multi-Choice/Participation	1			-R/.10*		O/.05 C/.10	
Multi-Choice/No Participation	2			-R/.02		O/.02	
No Choice/Participation	3					O/.05	
No Choice/No Participation	4					C/.10	
Group Participation	5						
Control Group	6						

TABLE 9

SIGNIFICANCE OF DIFFERENCES BETWEEN PRETEST AND POSTTEST MEANS ON TOTAL AND SUBTEST ISA SCORES FOR LOW IQ NEGRO GROUPS (N = 73)

		1	2	3	4	5	6
Multi-Choice/Participation	1		T/.02*	T/.01 A/.05 O/.02	T/.01 A/.10 V/.02		T/.05 A/.05
Multi-Choice/No Participation	2					-T/.05	
No Choice/Participation	3					-T/.01 -O/.05	A/.05
No Choice/No Participation	4					-T/.10 -V/.10	
Group Participation	5						T/.10 O/.10
Control Group	6						

*First figure presented designates the total test (T) or specific subtest; second figure is level of significance determined by t-test. If sign is positive, the group to the left is superior; if sign is negative the group at the top is superior.

entire study where an acceptable level of significant superiority (< .05) over the Control group was obtained. This significant superiority was also obtained on the Awareness subtest (< .05), as was the case with the No Choice/Participation treatment. It seems apparent that the Low IQ Negro group of subjects was most susceptible to the experimental treatments combining participation with the opportunity to select and next presentational segment, and to Group Participation procedures.

Non-Negro subjects. Although the analysis of variance showed no significant attitude changes among either the High IQ or Low IQ Non-Negro groups, the t-test comparisons are included for comparative purposes, as shown in Tables 10 and 11. The patterns of response differed sharply between these two mental ability groups, as they did with the Negro groups. With the High IQ group, the Responding subtest showed the greatest variability, generally favoring the No Choice/Participation group. With the Low IQ group, the Multi-Choice/No Participation treatment appeared to be least effective on the Characterization subtest, and the Group Participation treatment showed the greatest superiority on three of the subtests. However, because the small size of the Non-Negro groups and the sparcity of major differences, little can be generalized from the analysis of these data.

Total subjects. Comparisons by t-test for the combined racial groups split by IQ level are presented in Tables 12 and 13. Only the Responding subtest showed significant differences, between High IQ groups, in general favoring the No Choice/Participation treatment. As with the Low IQ Negro groups, the Multi-Choice/Participation treatment showed superiority among the Total Low IQ groups. The Total ISA measure favored this version over the two No Participation versions and the No Choice/Participation, all at the .05 level. In addition, this version showed a superiority on three of the subtests. Somewhat the same pattern of differences prevailed with the Total Low IQ groups as with the Negro Low IQ groups, but not as pronounced.

Summary of Results

The Low IQ Negro group was the only grouping to show a significant difference in attitude change among the treatment versions.

The patterns of attitude change varied greatly between the High IQ and Low IQ groups for all racial groupings.

The Multi-Choice/Participation treatment was significantly more effective in bringing about positive attitude changes among the Low IQ groups than any of the other treatments with the exception of the Group Participation mode.

TABLE 10

SIGNIFICANCE OF DIFFERENCES BETWEEN PRETEST AND POSTTEST MEANS ON TOTAL AND SUBTEST ISA SCORES FOR HIGH IQ NON-NEGRO GROUPS (N = 42)

		1	2	3	4	5	6
Multi-Choice/Participation	1			-R/.10*			
Multi-Choice/No Participation	2				R/.10 T/.05		
No Choice/Participation	3				R/.05		R/.10
No Choice/No Participation	4					-R/.05	
Group Participation	5						
Control Group	6						

TABLE 11

SIGNIFICANCE OF DIFFERENCES BETWEEN PRETEST AND POSTTEST MEANS ON TOTAL AND SUBTEST ISA SCORES FOR LOW IQ NON-NEGRO GROUPS (N = 46)

		1	2	3	4	5	6
Multi-Choice/Participation	1						
Multi-Choice/No Participation	2				-C/.10*	-C/.02	-C/.10
No Choice/Participation	3					-A/.05	
No Choice/No Participation	4					-O/.10	
Group Participation	5						A/.10
Control Group	6						

*First figure presented designates the total test (T) or specific subtest; second figure is level of significance determined by t-test. If sign is positive, the group to the left is superior; if sign is negative the group at the top is superior.

TABLE 12

SIGNIFICANCE OF DIFFERENCES BETWEEN PRETEST AND POSTTEST MEANS ON TOTAL AND SUBTEST ISA SCORES FOR ALL HIGH IQ GROUPS (N = 94)

		1	2	3	4	5	6
Multi-Choice/Participation	1			-R/.10*			
Multi-Choice/No Participation	2			-R/.05			R/.02
No Choice/Participation	3				R/.05		
No Choice/No Participation	4						
Group Participation	5						
Control Group	6						

TABLE 13

SIGNIFICANCE OF DIFFERENCES BETWEEN PRETEST AND POSTTEST MEANS ON TOTAL AND SUBTEST ISA SCORES FOR ALL LOW IQ GROUPS (N = 122)

		1	2	3	4	5	6
Multi-Choice/Participation	1		T/.05*	T/.05 O/.10	T/.05 O/.10		A/.05
Multi-Choice/No Participation	2						-C/.10
No Choice/Participation	3					-O/.10	A/.10
No Choice/No Participation	4					-O/.10	
Group Participation	5						-O/.10
Control Group	6						

*First figure presented designates the total test (T) or specific subtest; second figure is level of significance determined by t-test. If sign is positive, the group to the left is superior; if sign is negative the group at the top is superior.

CHAPTER IV

CONCLUSIONS, DISCUSSION, AND IMPLICATIONS

This chapter will present the specific conclusions that may be derived from the data, discuss the results of the study, and suggest implications of the study for the design of media intended to change attitudes, opinions and motivations.

Conclusions

The following conclusions may be made from an analysis of the results of the study:

1. All experimental treatment groups, presented with audio-visual stimuli designed to change attitudes toward the values of school learning made positive attitude shifts from pretest to posttest measurement.

2. But the differences favoring the experimental groups over the control group were small and were found, in general, only for the Multi-Choice/Participation treatment.

3. Active participation by the subjects was most effective in producing the positive attitude changes, particularly with Negro subjects. When such participation was combined with the opportunity to select the next presentational segment of the communication, the greatest attitude change occurred.

4. When no opportunity for participation or choice was given, the attitude change was smallest.

5. With Negro subjects and with the total population, the Multi-Choice/Participation treatment was the most effective.

6. With Non-Negro subjects there was less variability among the treatment groups, but the Group Participation mode was favored slightly.

7. The Negroes with lower mental ability were the only subjects to show a significant difference in attitude change among the treatment versions.

8. The patterns of attitude change varied greatly between subjects with higher mental ability and those with lower mental ability for both Negroes and Non-Negroes.

9. The Multi-Choice/Participation treatment was significantly more effective in bringing about positive attitude changes among the subjects with lower mental ability than any of the other treatments with the exception of the Group Participation treatment.

10. There was a tendency for the subjects with higher mental ability to show greater attitude change on the Responding dimension of the ISA measure and for the Negroes of lower mental ability to show the greater change on the Awareness dimension.

11. Overall, the study demonstrated the feasibility of designing audiovisual stimulus material to bring about changes in attitudes. It showed that such changes would more likely occur when subjects were provided an opportunity to participate actively by responding to the content of the message. It supported the contention that stimulus materials tailored to the characteristics of a particular audience would have a greater chance of changing the attitudes of that group than of a different group. And it indicated that subjects of lower mental ability were more susceptible to such persuasion.

Discussion

The results of this study, exploratory as they are, appear to support findings from earlier research--namely, that persuasive communications designed to fit the predispositions or cultural values of the audience have a greater likelihood of modifying attitudes than communications that do not do so. The results also supported the contention that the engagement by subjects in active participation during exposure to audiovisual stimuli will have persuasive effects.

Predispositions of the Students

In designing the experimental stimulus treatments an effort was made to structure the content and employ an approach that would be congruent with the personality structure, interests, aspirations, anxieties, and social environment of the subjects whose attitudes the communications were designed to modify. Because this target audience was the Negro junior high school pupil from a culturally disadvantaged geographical area, the audiovisual treatments utilized the voices of Negro boys with problems, visuals with the actions of such boys depicted, and a Negro narrator. The tendency, therefore, for the Negro subjects to show a greater attitude shift than the Non-Negro subjects was consistent with expectations of the experimenters and with the results of previous research reported in Chapter I.

It should be remembered, however, that the Non-Negro subjects were also from this same disadvantaged area and, with the possible exception of the Orientals (which comprised 42% of the Non-Negro group), may have had many of the same interests, aspirations, and anxieties as the Negro subjects. The Non-Negro group, also, made attitude shifts in the positive direction.

The experimenters observed that, during the administration of the stimulus materials to the subjects in the experimental trailer, the boys were interested, concentrated intensely on the audiovisual message, and appeared to relish the opportunity to express themselves into the microphone. This experimental behavior certainly can be partly attributed to the physical conditions under which they received the stimuli, but it may also have been a function of the nature of the material itself and its congruity with their own feelings. Many of the boys spontaneously remarked to the experimenters about their enjoyment of the presentation.

It seems reasonable to assume that the experimental materials used in this study conformed to the attitude structure and characteristics of the viewers (at least so far as the Negro group was concerned) and that such compatibility contributed at least partially to the resulting positive attitude change. As a consequence of these results, further more intensive study of the relationships between the learner's affective characteristics and the design of materials is recommended.

Active Student Participation

The potency of the participation variable in this exploratory study was the most significant finding and was consistent for all the subject groups. It confirmed the conclusions of Berelson and Steiner (1964) and presented some needed evidence regarding the influence of active student participation on attitude change.

The overall lack of significant differences between the experimental groups and the control groups (with the exception of the Multi-Choice/Participation and Group Participation groups) suggests that the building in of cultural factors alone was not sufficiently powerful to bring about attitude change. Rather, some other factor or factors needed also to operate. This factor seemed to be, predominately, the variable of "active student participation." When combined with either the opportunity to make some choices relative to materials to be viewed or with group discussion, the positive attitude shift was more apparent. There is no assurance that this is the proper explanation, but it is apparent from the results that these elements combined to produce some significant changes. Interestingly, the participation/choice combination was effective with the Negro subjects and not with the Non-Negro subjects, whereas the participation/group discussion combination appeared to be more effective with the Non-Negro subjects. The possible explanation of this racial difference is difficult to determine.

The Low IQ Negro group deserves special attention, because these were the subjects who appeared to be most susceptible to the variations in the experimental treatments. Apparently these subjects were particularly influenced by the opportunity to participate actively during the exposure to the stimulus message. The differences favoring both the Multi-Choice/Participation and the Group Participation treatments on the Total ISA measure were highly significant, both over the other experimental versions and the Control group itself. In addition, both the Multi-Choice/Participation and No Choice/Participation treatments showed significant changes over the Control group on the Awareness subtest. It would appear that "active student participation" by Negroes of lower mental ability during the presentation of an attitude-changing communication was especially efficacious in generating more positive attitudes toward school learning and toward staying in school and obtaining an education, particularly in sensitizing them to the importance of school learning and in making them willing to receive information about school learning. It was largely to this group of students that the message of the audiovisual communication was addressed. The boys that were interviewed on the audio tape were not, in general, over-intelligent. Their school achievement was below average, and the low intelligence subject groups may have identified with them more readily than the higher intelligence groups. Also, the opportunity to express himself by participating may be a more important factor with these students. The actual explanation of this significant change by the low mental ability Negroes cannot be determined by this study, but the leads given suggest further investigation of the participation variable as it relates to level of intelligence.

Implications

The results of the study have certain positive implications for the design of audiovisual media planned for the modification of attitudes, opinions, and motivations.

First, the content of the communication and the presentational approach employed should be congruent with the characteristics, interests and anxieties of the audience. This assumes some kind of pre-production analysis of the intended audience, perhaps similar to that used by Edling (1963) or Levonian (1960), and the subsequent preparation of materials to be in accord with these audience traits.

Second, the message should ideally be designed so as to provide for individual involvement during the presentation of the communication and some form of active participation in response to the message.

Third, the communication should ideally give the receiver of the message a choice of alternative materials or tracks to follow.

A consideration of the above three factors in designing audiovisual media of an attitude-changing nature should result in a presentation with increased potential for bringing about the changes desired.

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A P P E N D I C E S

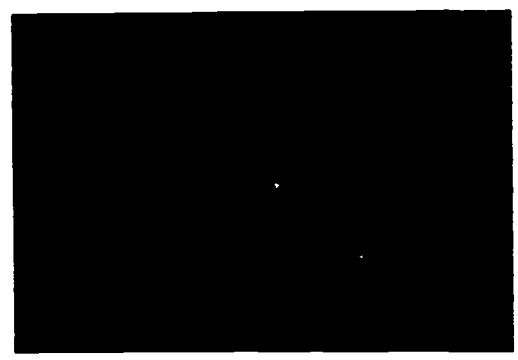
APPENDIX A

SCRIPTS OF EXPERIMENTAL TREATMENTS

NOTE: The visualized script for the most complete experimental treatment--the Multi-Choice/Active Participation version--is presented in its entirety immediately below. This is followed by notations of changes made in the other three treatments.

1. WILLIE: Because he's got an older brother and sister at home ... guys away from home and don't have no jobs, you know ... that's the reason why most of them feel that education is not so important in daily life. You can sit there and tell him to go to school, get your education so you can get a good job. Yes, he listens to this. But this won't abolish the fact that he has an older brother or sister at home that did go to school, finish high school, and went to college awhile. They are unemployed.

2. NARRATOR: That was Willie. Willie is 20 years old. In a few minutes he is going to tell you of his experiences with school and with the law. You are going to hear the stories of five guys ... their true stories ... told by four junior high school boys and by Willie. They will tell you about the school and what is important to them and about their schools. Here, first, is a boy called Diamond.



3. DIAMOND: You like people to think about you ... like some of my teachers. I like them to think about me, to see what kind of problems I have, and try to understand me better; because, if they understand me better, it will be easier for me, you know, in a way, and will be easier for the teachers, too. And me, I like to think about myself: what I'm going to grow up to be. I don't want to grow up to be a wino, or some dude on skid row. I want to be somebody that people can look up to; or somebody that, when you walk down the street, they won't be pointing to and say, "There's that bum!"...

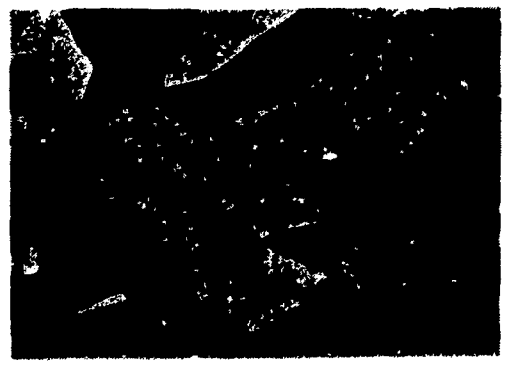
4. ... Or they say: "There's that dude that we saw on TV, that dude that was singing real good!" And I like lots of friends ...

5. ... 'cause like, if I have a problem, I want to run to my friends; and I won't keep it on my chest all the time. I'll run to my friends and get it out. Like if I get into some kind of trouble. I want to go to my friends and let them tell me what I should do. And I like to talk to people. And I want them to understand me. I don't want to be talking like some of those dudes that say: "Well, man ... where you goin', man?" You know. They got some kind of voice that you can hardly tell what he's saying ... like a hoarse voice. People can understand you better if you just keep up on your English. I'll just tell you about the time when I was going to be in the sea cadets ...

6. ... Me and this other dude, we went to join up; and the man said: "Well, you got to be 14." So we said: "Well, we'll be 14 in a year. Can't we still look at the sheets to sign up at?"

7. ... He said: "I can't do that because you will probably cheat. You know--not saying that you will cheat, but you never know. You can't take a chance." And he said: "Well, you don't have to worry because you're going to get a good one if you can read." And that caught me right there. I just started thinking: got to start reading harder.

8. NARRATOR: What do you feel will help Diamond most with his reading? One, his hope of getting into sea cadets? Two, his wanting his friends to look up to him? Or three, his willingness to get extra help in reading? Choose 1, 2, or 3 by pushing the button marked A, B, or C. (TAPE STOPS) That's it.

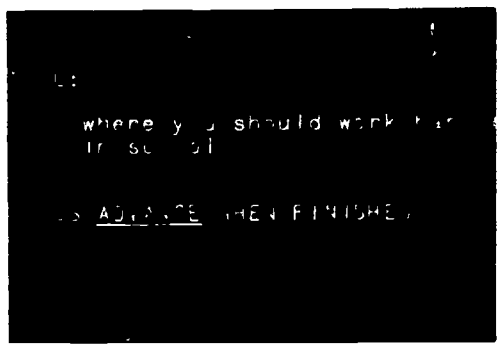


9. DIAMOND: So I've been trying ... trying my best, you know. My teacher at school days: "Diamond, you're doing very good." And I say in my mind: "Oh, sure!" Well, I think I am doing pretty good because some of the words, she said, that "you're teaching yourself" because she's not hardly helping me at school.

10. ... She's helping another boy. He's almost as bad as me, but he's kind of better. How I got in the reading class in that school was I couldn't read very good. They ask me: Do I want to be in a reading class? I said: "Well ... er ... yes, yes, I want to." And try to be better in reading 'cause everybody knows that they're kind of messed up in one thing or another ... like I'm messed up on reading ...

11. ... and somebody else might not be a good track star, or can't spell very good, or can't do ... you know, physical things like run, or like just talk. Not saying that I'm a very good talker, but I'm trying my best. Well, some people, they be harder to learn than other people; so that is why you got to study harder ...

12. ... in one point than you do in another point. Like myself, I'm not good in reading, and when I was born my mind wasn't as well developed. And you got to work on them. You know, you got to work on it little bit by little bit. You can't put everything at the same time.

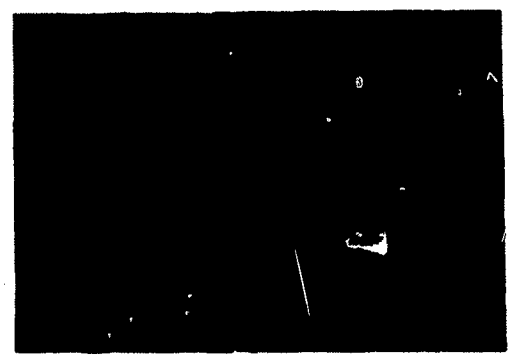


13. NARRATOR: Now speak into the microphone, the way Diamond did. Tell in a few words in what part of your own school work you need to work harder ... bit by bit. (TAPE STOPS)

14. DIAMOND: The point I'm trying to get to you guys is that it is like the world is your house. Try to be better. Don't try to be famous and everything 'cause there is always somebody that can beat you. Just try to be better. And when I grow up, I want to be a singer. First, I want to go in the Navy, or join the Navy for four years. When I get out, I'll try to be a singer.

15. ... And if I don't make it, then I'll go back into the Navy and stay in there for the rest of my life, or part of it. Till I get too old, then I'll get a discharge; then the Navy gives me money to live on. Well, you know, I'd rather be in the Navy 'cause I just like the Navy.

16. ... I want to be on a big ship like an aircraft carrier, and that's why. I know I'll have to read to go into the Navy ... in the Naval Cadets or the Navy. So I just made up my mind that I would try. The moral to this is: some people don't even want to try. Like me. Sometimes when I'm doing real bad, sometimes I want to quit. But I don't. Sometimes I want to tear up the paper, and nobody even made words to read. But I just stop. If nobody made words to read, how could we talk or anything? Like that? How could we learn music without words?

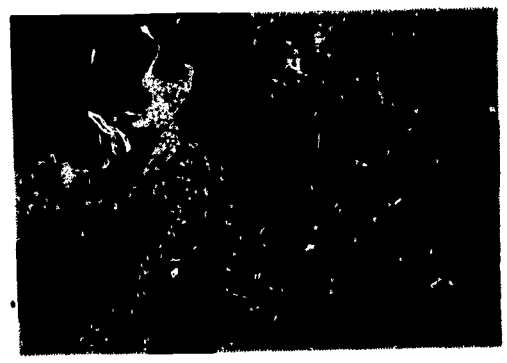


17. NARRATOR: You have heard Diamond's story. Now talk into the microphone and tell in a few words what you learned from his story. Was there something that he said which is important to you? (TAPE STOPS)

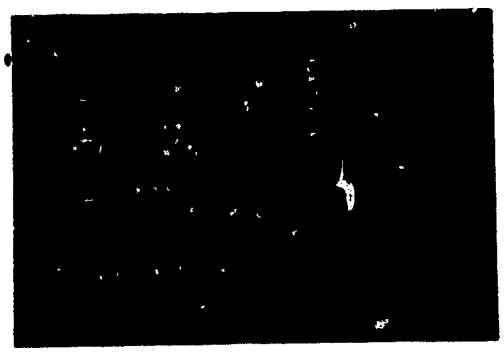
18. ... Now let's meet Dwight. Let's hear about how he learned to do something he really wanted to do.

19. DWIGHT: Well, the first thing I wanted to learn was how to throw football passes ... when I saw everyone else throwing it. And I asked my father about it, and he said: "You know, there's nothing to it." Then he took me outside, and he bought a football, and then he showed me how. I started when I was about six years old, and from then on I knew how to do it, and I pass very well.

20. ... And from then on, that's my favorite sport that I like to play. The reason that I want to learn how is that everyone is able to do good in some sport; so I'm able to do good in football. He practiced every day with me after school and in the evening, and also on the week ends and things. And, when I was nine, when I turned nine, I was able to play it very well. Well, the way I learned was to, first, just have a grip on the ball, scoop it in your hand. You have to hold it good on the seam, to get the pass off good and get the spin on it.



21. NARRATOR: Now Dwight is going to tell us how learning in class is a lot like learning in sports. You will learn that Dwight feels paying attention is most important. Why does he feel this way? One, because he wants to look good with his friends? Two, because he wants to get on the right side of the teacher? Or three, because he wants to keep going to school, or even to college? Choose which one you think by pushing button A, B, or C. (TAPE STOPS) That's it.

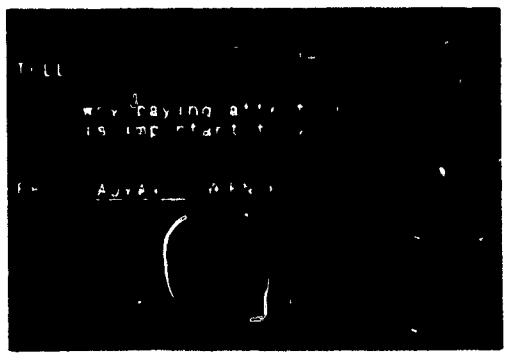


22. DWIGHT: Well, take for example if you're in an English class, and you want to learn how to write a sentence correctly. You have to pay attention and want to be able to do this because, later in the years, it's going to affect you to get a job. You're going to think back, and you'll say: "I should have listened to the teacher in those days. Now I can't get this thing." 'Cause it's going to affect you in college. You may not be

taking English, but it'll affect you in some kind of foreign language, biology or something. There may be someone to tell you: "Let's play something else," just to goof off in class. The teacher might think that you're talking,

23. ... that you don't want to know how. But you really do. She'll say: "Stop talking. Everyone of us wants to learn." Then she'll ask you to explain in class; and then she'll say you weren't listening. And you'll say: "I was listening." But she might not believe you, though she might not tell you, because you were talking in class. And it won't be her fault. Later you'll want to know, and it'll be too late.

24. NARRATOR: Now let's hear you say a few more words about why you feel paying attention in class at school is very important to you. (TAPE STOPS)



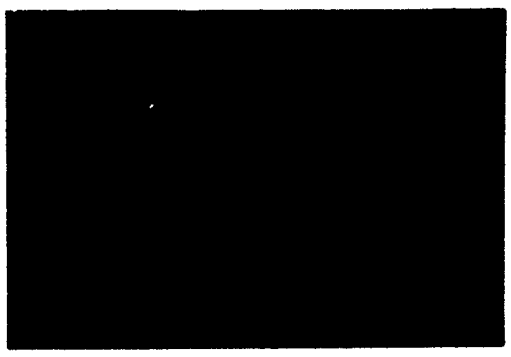
25. ... (BACKGROUND MUSIC) That music was from a junior high school orchestra. In that orchestra, Charles has proved to be one of the best violin players in our city. He now has a music scholarship, giving him the lessons he deserved.

CHARLES: My uncle bought me a violin about two months aft started playing; and I would practice at home about an hour and a half or so;

26. ... and we do it during nutrition time, or something like this. I decided I really want to work on the violin. And it was a couple of weeks after I started the class when we saw this movie of Jascha Heifetz, and it was real interesting. And I said: "Gee, boy! But that guy can play!" And I said: "I wish I could be like him some day." And I began to practice real hard. And the

teacher, he helped me during nutrition time, like I said before. I just practiced real hard and practiced at home.

27. NARRATOR: Charles is going to tell us of three problems he had in learning to play the violin well: one, having to practice when he wanted to go out and play; two, having to get high marks so his teachers would let him be in the orchestra; and three, having to learn how to express himself through music. Which of these problems do you feel would be the hardest for you? Choose one, two or three by pushing one of the buttons marked A, B, or C. (TAPE STOPS) That's it.



28. CHARLES: It was pretty hard at first because I was practicing trying to keep up with some of the other kids in class. I was in "Strings Two." And he recommended me to set a specific time for practice and a specific time for me to do other things. Sometimes my brother tells me when he comes home: "Aw, you gotta be playing something like that?" I tell him to go out of the room, stuff up his ears, or something like that. It's my practice time.

29. ... I just tell my friends I gotta go inside; my mother says it's time for me to practice. When I grow up, I would like to be a professional musician or teacher of music, and I want to be this because I love music and love to be around people who love music. It is from school that I learned all of my music abilities and the techniques of music and music playing.

30. ... In my music class, if you are enrolled in music ... I think that they started this as a rule ... you can't get below a C in any of your classes or else they figure it's taking too much of your time in some of your studies: like English, history, or math, Algebra. And in this organization's chapter, called Modern Music Masters, you can't

get a D, U, or Fail in any of your classes, or else you're not eligible to be a member of this organization.

31. ... I think this is a very outstanding organization. It has, I think, some of the better players and some of the smarter people in other classes, not just in music. I have to work hard in all my studies, and that's how I got in Modern Music Masters. I think that in literature and poets, and something like this, I feel that they express themselves in writing. I express myself in music.

32. NARRATOR: Now let's hear you talk into the microphone again. In a few words, tell us some way in which school work, or doing well in school, help you right now in something you do outside of school. (TAPE STOPS)

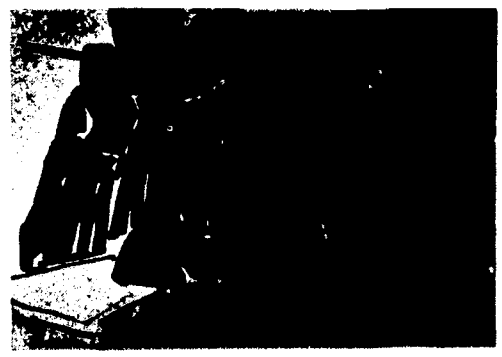
33. NARRATOR: Now let's hear from Eric. Eric went from a D student to a B student. He had some tutoring once a week after school. Let's find out what helped him change so much for the better.

34. ERIC: Now I used to think it was the teacher's fault, but now I know it was my fault because I wasn't trying hard. I know that I can do something if I put my mind to it. My main problem was I was just not doing my homework.

35. ... I came home early in the day, and my teachers told me that I could do better. But to them it seemed like I just didn't care. It didn't seem that way to me, but I had never looked at it from their point of view. Then I saw I wasn't ... really wasn't trying. In this semester, I just started to try harder to do my homework, and not be so noisy in class, and try as hard as I could to understand the lesson. And the tutoring helped me quite a lot too.

36. NARRATOR: What would you like most to hear Eric speak about? One, how he learned to pay attention in class? Two, what shamed him into trying harder? Or three, how being tutored outside the class helped him to improve? Choose one, two or three by pressing one of the buttons marked A, B, or C. (TAPE STOPS) That's it.

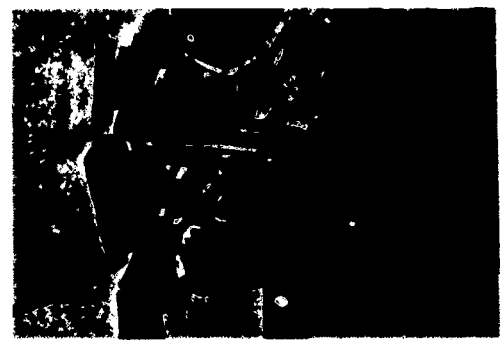
37. ERIC: Well, the way I used to feel, I'd sit there and listen; but I didn't soak up anything because I had my mind, always had my mind, on something else ... instead of where it should have been, up in front of me with the teacher. And now I let other things go until later on. I used to get a lot of U's in English and Math ... because Math was sort of hard to catch onto at first ... now they are sort of easy, and I'm doing much better, and it is getting easier for me. English was a sort of problem because I didn't understand a thing about English. My mother was good at it, but I just couldn't seem to take up a thing.



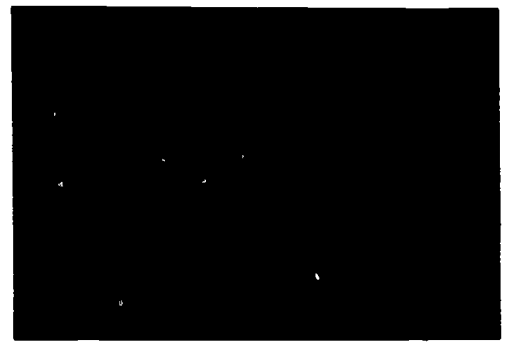
38. ... I guess it was because I wasn't paying attention to the teacher, and I was talking and going on with my other friends. But they were trying to get it in and talking at the same time; but I wasn't trying to do anything but talk. It wasn't the tutoring class that changed my attitude toward things. It was me over the summer myself. It was just turning summer when I got out of A-8 and into B-9.

39. ... All my cousins did pretty smart. I have a pretty smart family, doing A's and B's. And I looked at their report cards, then I looked at mine. And I wasn't satisfied. This sort of bothered me 'cause all I could hear was the family talking about how smart they were. They hadn't said anything about me, but it just sort of irritated me that they were so smart.

40. And I was wondering why I wasn't doing any better than them. That's when I started to look at myself from the teacher's point of view, instead of just looking at myself from my point of view.



41. NARRATOR: Now let's hear from <u>you</u> again. You know that Eric made up his mind to do better in school. Tell us one or two ways that he <u>could</u> do better.
(TAPE STOPS)



42. WILLIE: I went to high school for the 10th grade. I dropped out then for about six months. Than I decided to go back because there was nothing to do in the streets. I found out that people's telling you "It's a good time laying around," was wrong. I went back to school, and I stayed until I finished the 11th grade. When I finished the 11th grade, summer was coming up, and I got into a little trouble.

43. ... I was involved in a shooting. A fellow tried to take my life. I also had a gun, and I shot him. I had to go to court for it. I wasn't found guilty for the shooting, but I was sent to camp and made a ward of the court for gang riot. After I went to camp, I spent some two months in the hospital, and that's where I began to find myself.

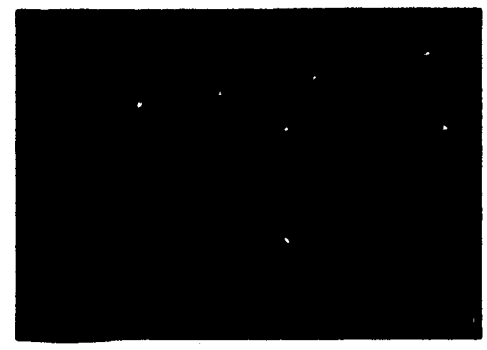
44. ... I had a counselor, and he was very honest. He wasn't what you could call a social worker--he spoke from his heart, and he didn't lie.

45. ... He told me how I stood and what I would have to do to graduate from camp. I made up my mind to get down to business and do something about it myself.

46. The while I was in camp, I got interested in drafting. And the seven months I was there, I learned as much as some boys have in two years of drafting. I still do it as a hobby. I graduated in May, 1964 from camp. I came out. I sort of lay around for awhile, and I couldn't make my my mind what I was going to be.

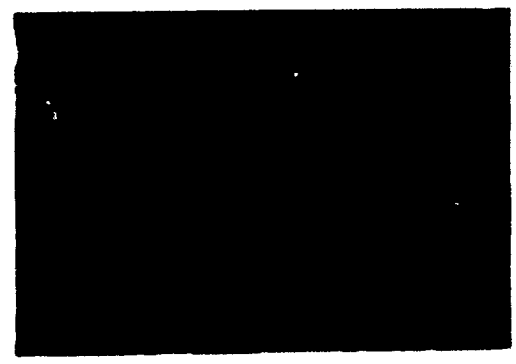
47. ... And a very close friend sat up one night with me, and talked to me, and told me I wasn't doing anything by staying at home, and school wasn't that hard. He meant that I always did have it easy. That was as far as my studying was concerned. I catch on easily.

48. NARRATOR: Willie had to make a choice. He could choose: one, to return to his gang; two, to finish school; or three, to find a job at once. What do you think Willie did? Push buttons A, B, or C to tell what you feel Willie <u>should</u> have done. (TAPE STOPS) That's it.



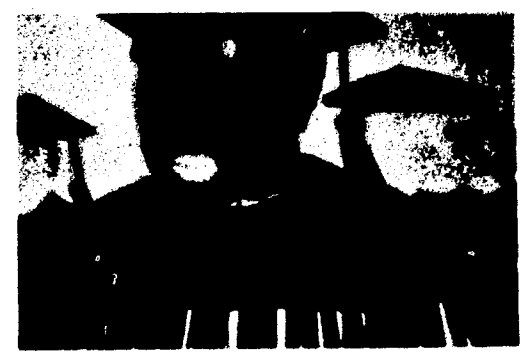
49. WILLIE: I decided to go back to school. And I didn't take my parents with me. I walked to the school, and I talked to the vice-principal on my own. And he actually didn't believe that I could make it because I had gave him so much trouble.

50. ... As far as discipline, I just couldn't go along with the program because that was a sign of power to me. I always rebel against authority of any kind--that goes with parents, school teachers, and police officers. That had caused me quite a lot of trouble in my younger years.



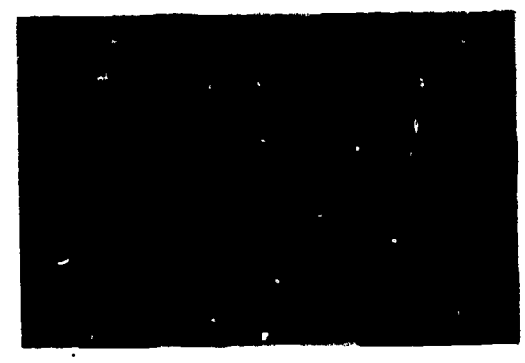
51. ... And so I ... for the first time in my life ... I made it. I begged the vice-principal to let me come back to the school. We made a deal: if I gave him any type of trouble ... that could be spitting on the sidewalk ... I would willingly drop out; and he would never have to worry about me no more. And so, after a semester, I graduated.

52. ... He was shocked. He couldn't believe it. He thought something strange was going on, and he told me seriously that he thought that I wouldn't last over two weeks. And he was very proud of me, and he took back those words he had stated earlier in the semester. And I found out he wasn't so bad as I had always been sure he was in the past. And I graduated from school in December of 1965. I got this job. I'm planning to go to school this fall, L.A. City College, and major in sociology.



53. NARRATOR: Willie got into trouble, but he made it, went back to school, and has a job. Use the microphone now to tell in a few words how you feel that school can help boys like you from getting into trouble the way Willie did. (TAPE STOPS)

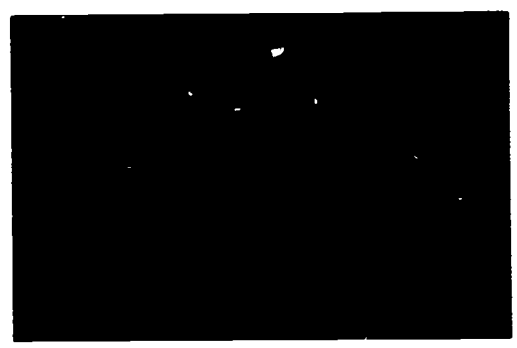
54. WILLIE: The important part that made me feel different about school and education is that I've always set a false example for my younger brother. I have a younger brother who is now being detained at a juvenile institution because I ... when he was younger, about 11 or 12 ... I was getting arrested at least two or three times a month. He thought that that was



the world. As I say, he is, as other boys, easily influenced by his older brother or sister. He felt ... I'm pretty sure of this ... that, as I was so known around the neighborhood, that he had to match that image. He had to prove to the people--the fellow, that is what we call the gang--that he was just as qualified to be associated with them as I was.

55. ... And my mother and my father, they never say anything about it; but I could see it on their faces: that it was my fault. If I hadn't have did this, he wouldn't have to go through this. I can see that, and it hurts me, you know. My mother and I have always been close. My father and I couldn't talk to each other until the last year or so. And she was hurt, and she was upset because he was going into this. He started getting arrested regularly. And it hurt me, you know. That sort of brought me to myself, and the fact that I had good counseling while I was at this forestry camp. If it hadn't been for these two, I think I would still be gang-oriented.

56. NARRATOR: From what you have heard from Willie and the other boys, how do you feel about drop-outs? About boys who leave school without finishing? Tell us in a few words what you feel about this. (TAPE STOPS)



57. WILLIE: To start off, most of my friends were drop-outs. And they had a lot to do with my dropping out. When I was out for awhile, my best friend ... he and I was real close ... we'd sit down and talk. And he told me that school wasn't the world, you know, but it's better than just laying around doing nothing. And you know a person just have to be doing something. He had a lot to do with my returning to school. Now I thank him for it ...

because, if it hadn't been for him, I might just be a nobody. And, to me, that is the worst thing in the world.

END OF TREATMENT

The other three experimental treatments varied from the above Multi-Choice/Active Participation version in the following ways:

No Choice/Active Participation and Group Participation: Did not include the narration and visuals as included in Scene Nos. 8, 21, 27, 36 and 48.

Multi-Choice/No Participation: Did not include the narration and visuals as included in Scene Nos. 13, 17, 24, 32, 41, 53 and 56.

No Choice/No Participation: Did not include the narration and visuals as included in Scene Nos. 8, 13, 17, 21, 24, 27, 32, 36, 41, 48, 53 and 56.

APPENDIX B

INVENTORY OF SELF APPRAISAL

Instructions: (to be read silently while examiner reads aloud)

On the following pages are brief statements which describe a group of students. After each statement you will find two spaces. Above the first column of spaces are the words Like Me. If the statement is true for yourself or if you feel the same way as the student making the statement, put an × in the first space.

Over the second column of spaces are the words Not Like Me. If the statement is not true for yourself or if you do not feel the same way as the student making the statement, put an × in the second space.

Practice Exercise:	Like Me	Not Like Me
1. John is a boy	_____	_____
2. Mary is a girl	_____	_____
3. Juan likes to draw	_____	_____
4. Maria thinks arithmetic is difficult .	_____	_____

Put a mark after each statement.

Be careful not to skip any of the items.

If you are not sure about an item, mark it the way you feel is most like yourself. For example, in Practice Statement 4, if arithmetic is sometimes easy, but more often you find it hard to understand, mark Like Me.

If, once in awhile, you find the statement hard to understand, mark the Not Like Me column.

Be sure and mark an answer for every statement.

There is no time limit, but do them as rapidly as you can, because your first thought will generally be the most accurate.

If you wish to change an answer, be sure to erase completely the one you don't want to count.

Any questions?

[NOTE: The designation and assignment of level in Krathwohl's affective domain is shown in capital letters after each item. The acceptable response for a positive attitude expression is checked in the two response columns. It should be understood that neither of these inclusions was shown on the measures administered to the subjects.]

	Like Me	Not Like Me
1. Art's teacher almost seems like a father or mother to him. (AWARENESS)	X	
2. Other kids come to Nat for help. (CHARACTERIZATION)	X	
3. Ustes finds it fun to reach the goals parents or teacher have set. (RESPONDING)	X	
4. Vic's parents and teacher are happy with the work he does. (RESPONDING)	X	
5. Bill always tries to be a good friend to others. (CHARACTERIZATION)	X	
6. When George is in a hurry, he sometimes copies his friends' schoolwork. (RESPONDING)		X
7. Henry likes to help others who have less than he does. (CHARACTERIZATION)	X	
8. Izzy usually treats others the way he wants them to treat him. (ORGANIZATION)	X	
9. Jack is really kind of bored with school. (AWARENESS)		X
10. Kermit feels that the things he is supposed to learn in school will have no real importance in life. (ORGANIZATION)		X
11. Martin is dissatisfied with school because they just do the same old things over and over. (ORGANIZATION)		X
12. Orville feels that you hardly ever get to do anything new, fun, or exciting at school. (VALUING)		X
13. Quentin often tries to get the best grade in class. (VALUING)	X	

	Like Me	Not Like Me
14. Rex usually tries to do better than he did on his last paper. (VALUING)	X	
15. Zeph like school because he does well. (VALUING)	X	
16. Al is usually near the top of his class. (VALUING)	X	
17. Art can't seem to do anything right. (VALUING)		X
18. Bob feels his teacher doesn't really understand him. (RESPONDING)		X
19. Carl feels teachers don't explain things well. (AWARENESS)		X
20. Greg greatly admires teachers. (RESPONDING)	X	
21. Harry likes others to tell him what to do because it's hard to make up his mind sometimes. (RESPONDING)	X	
22. Joe is usually told what to do. (RESPONDING)	X	
23. Bill thinks it's important to do well in school so you can get a good job and make lots of money. (ORGANIZATION)	X	
24. Ron would like to go to college. (VALUING)	X	
25. Tommy's father would like him to do well in school so he can get farther ahead in life than he did. (AWARENESS)	X	
26. Len will stick to his idea if he thinks he's right. (VALUING)	X	
27. Carl likes most of the things they do in school. (RESPONDING)	X	
28. Deon thinks school is a lot of fun. (RESPONDING)	X	
29. Ed likes to explore new things and ideas. (ORGANIZATION)	X	

	Like Me	Not Like Me
30. If Art doesn't understand class directions, he asks the teacher after class. (RESPONDING)	X	
31. Don often talks about his after high school plans with his parents. (ORGANIZATION)	X	
32. Ed's parents talk to him about the importance of a college education. (AWARENESS)	X	
33. Harry knows an adult who talks to him about the importance of school. (AWARENESS)	X	
34. Ken has had a teacher who knew how to do something better than anyone else. (AWARENESS)	X	
35. Larry feels his parents did well in school. (AWARENESS)	X	
36. Pete admires a relative who went to college. (AWARENESS)	X	
37. Sam's friends talk about their plans to go to college. (VALUING)	X	
38. Tom has close friends in the upper grades who do well in school. (VALUING)	X	
39. Van has many friends whose parents have gone to college. (VALUING)	X	
40. Ernie feels every class is important in some way. (CHARACTERIZATION)	X	
41. Frank wakes up early on school days. (RESPONDING)	X	
42. George does not like to come back to school after vacations. (AWARENESS)		X
43. Jack gives up when the assignment is very difficult. (RESPONDING)		X
44. Lee often checks his work to make sure it is right. (VALUING)	X	
45. Martin continues to work on problems even when he is discouraged. (VALUING)	X	

	Like Me	Not Like Me
46. Neil does not set aside a certain amount of time for study each day. (VALUING)		×
47. Ted regularly reviews what he learns in school. (ORGANIZATION)	×	
48. Tim always hands in his homework on time. (VALUING)	×	
49. John always follows the teacher's directions very carefully. (VALUING)	×	
50. Pete does not expect to do well in school in the future. (ORGANIZATION)		×
51. Nat feels he can get good grades even if the work is more difficult. (ORGANIZATION)	×	
52. Tab would rather spend his spare time working instead of studying. (VALUING)		×
53. Fritz goes to the show before he finishes his homework. (VALUING)		×